Department of Energy
Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

2199

APR 27 1999

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

DOE-0678-99

Dear Mr. Schneider:

TRANSMITTAL OF RESPONSES TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE PROJECT SPECIFIC PLAN FOR SAMPLING OF REMOVAL ACTION 17 STOCKPILES 1, 2, AND 4 FOR ON-SITE DISPOSAL FACILITY WASTE ACCEPTANCE CRITERIA ATTAINMENT

This letter transmits responses to Ohio Environmental Protection Agency (OEPA) comments on the draft Project Specific Plan (PSP) for Sampling of Removal Action 17 Stockpiles 1, 2, and 4 for On-Site Disposal Facility (OSDF) Waste Acceptance Criteria (WAC) Attainment. Verbal approval of the PSP was received from the U.S. Environmental Protection Agency (U.S. EPA) on April 20, 1999. Field implementation of this PSP is scheduled to begin the week of April 26, 1999. However, because there was a comment on the number of physical samples that are planned to be collected, only the real-time scanning of the surface of the stockpiles will be initiated until concurrence with these responses is received from OEPA. Following concurrence, surveying of sample locations, and physical sampling will begin.

If there are any questions regarding these comment responses, please contact Robert Janke at (513) 648-3124.

Sincerely,

Johnny Reising

Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Nickel

Enclosure

1

cc w/enclosure:
J. Saric, USEPA-V, SRF-5J
T. Schneider, OEPA-Dayton (three copies of enclosure)
F. Barker, Tetra Tech
AR Coordinator, FDF/78

cc w/o enclosure:
K. Nickel, OH/FEMP
R. Abitz, FDF/52-0
D. Carr, FDF/52-2
J. Chiou, FDF/52-0
T. Hagen, FDF/65-2
C. Messerly, FDF/52-0
ECDC, FDF/52-7

APPENDIX D
SUMMARY OF EXISTING DATA ON SP-1, SP-2, AND SP-4

TABLE D-1
SUMMARY OF EXISTING DATA ON SP-1

2199

SP-1 TOTAL URANIUM RESULTS

Total Uranium	98.8 ppm	Total Uranium	47.1 ppm
Total Uranium	77.8 ppm	Total Uranium	40.6 ppm
Total Uranium	75 ppm	Total Uranium	32.9 ppm
Total Uranium	69.4 ppm	Total Uranium	26 ppm
Total Uranium	66.7 ppm	Total Uranium	17.7 ppm
Total Uranium	60.3 ppm	Total Uranium	11.5 ppm
Total Uranium	47.1 ppm		

SUMMARY OF SP-1 TCLP RESULTS
(based on results of 13 samples)

Benzene	<0.010 ppm	Heptachlor	<0.00005 ppm
Bis(2-chloroisopropyl)ether	<0.010 ppm	Hexachlorobenzene	<0.010 ppm
Bromodichloromethane	<0.010 ppm	Hexachlorobutadiene	<0.010 ppm
Carbazole	<0.010 ppm	Hexachloroethane	<0.010 ppm
Carbon Tetrachloride	<0.010 ppm	Lindane	<0.010 ppm
Chlordane	<0.00005 ppm	Methoxychlor	<0.00005 ppm
Chlorobenzene	<0.010 ppm	Methyl Ethyl Ketone	0.011 ppm
Chloroethane	<0.010 ppm	4-Nitroaniline	<0.025 ppm
Chloroform	<0.010 ppm	Nitrobenzene	<0.010 ppm
o-Cresol	<0.010 ppm	Pentachlorophenol	<0.010 ppm
m-Cresol	<0.010 ppm	Pyridine	<0.010 ppm
p-Cresol	<0.010 ppm	Tetrachloroethene	0.005 ppm
2,4-D	<0.010 ppm	Toxaphene	<0.005 ppm
1,4-Dichlorobenzene	<0.010 ppm	2,4,5-TP (Silvex)	<0.010 ppm
1,2-Dichloroethane	<0.010 ppm	Trichloroethene	<0.010 ppm
1,1-Dichloroethene	<0.010 ppm	2,4,5-Trichlorophenol	<0.025 ppm
1,2-Dichloroethene	<0.010 ppm	2,4,6-Trichlorophenol	<0.010 ppm
2,4-Dinitrotoluene	<0.010 ppm	Vinyl Chloride	<0.010 ppm
Endrin	<0.0001 ppm		

SUMMARY OF SP-1 TOTAL METALS RESULTS
(based on results of 13 samples)

Arsenic	5.6 ppm	Lead	50 ppm
Barium	112.3 ppm	Mercury	0.273 ppm
Cadmium	1.1 ppm	Selenium	<20 ppm
Chromium	33 ppm	Silver	<2 ppm

TABLE D-2
SUMMARY OF EXISTING DATA ON SP-2

P. 2199

SP-2 TOTAL URANIUM RESULTS

Total Uranium	154 ppm	Total Uranium	43.5 ppm
Total Uranium	132 ppm	Total Uranium	24 ppm
Total Uranium	121 ppm	Total Uranium	15.3 ppm
Total Uranium	70.6 ppm	Total Uranium	<11 ppm
Total Uranium	69.6 ppm	Total Uranium	<11 ppm
Total Uranium	52.9 ppm		

SUMMARY OF SP-2 TCLP ORGANICS RESULTS
(based on results of 44 samples)

Benzene	<0.08 ppm	Hexachlorobutadiene	<0.04 ppm
Carbon Tetrachloride	<0.08 ppm	Hexachloroethane	<0.04 ppm
Chlorobenzene	<0.17 ppm	Methyl Ethyl Ketone (2-Butanone)	<0.33 ppm
Chloroform	<0.08 ppm	Nitrobenzene	<0.04 ppm
o-Cresol	<0.04 ppm	Pentachlorophenol	<0.04 ppm
m-Cresol	<0.04 ppm	Pyridine	<0.04 ppm
p-Cresol	<0.04 ppm	Tetrachloroethene	<0.08 ppm
1,4-Dichlorobenzene	<0.17 ppm	Trichloroethene	<0.08 ppm
1,2-Dichloroethane	<0.08 ppm	2,4,5-Trichlorophenol	<0.04 ppm
1,1-Dichloroethene	<0.08 ppm	2,4,6-Trichlorophenol	<0.04 ppm
2,4-Dinitrotoluene	<0.04 ppm	Vinyl Chloride	<0.17 ppm
Hexachlorobenzene	<0.04 ppm		

SUMMARY OF SP-2 TCLP METALS RESULTS
(based on results of 11 samples)

Arsenic	<0.02 ppm	Lead	0.073 ppm
Barium	1.18 ppm	Mercury	<0.001 ppm
Cadmium	<0.02 ppm	Selenium	<0.01 ppm
Chromium	<0.09 ppm	Silver	<0.05 ppm

TABLE D-3
SUMMARY OF EXISTING DATA ON SP-4

Existing data on SP-4 was summarized in Table 2-2 of the Sitewide Excavation Plan (2500-WP-0028, July 1998), which is reproduced here for reference.

TABLE 2-2

USTs TO BE CLOSED UNDER CERCLA

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
TANKS CLOSED BY REMOVAL — DEMONSTRATION OF SOIL FRLs ATTAINMENT NEEDED			
RAILROAD ENGINE HOUSE - BUILDING 24B			
UST-3	**Remediation Area:** 3 **Former Location:** 25 feet NE of Railroad Engine House (Bldg. 24B) **Fomer Volume:** 12,500 gallons **Former Size:** *10 foot diameter x 21 foot length; steel* **Former Accessories:** Pump located immediately S of tank	**Material:** Diesel Fuel COCs: Benzene . . . . . (FRL; no OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Barium . . . . . (FRL; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) Mercury . . . . . (FRL; OSDF WAC) **Reference MEFs:** 203, 584	**REMOVED — UST Removal Action appears to meet FRL criteria; Demonstration of Soil FRLs Attainment Needed.** Tank removed. Soil samples taken during tank removal had elevated concentrations of BETX, TPH and Lead. An additional 530 cubic yards of soil was removed from the UST-3 pit based on visual staining, petroleum odors and headspace analysis vs. background. Hydrocarbon contamination also found under train tracks in upper 3 feet of soil (tracks ran to W side of pit to engine house and E side pit) and soil was excavated to headspace criteria. Excavation was backfilled with clean gravel. Results from post-excavation soil sampling conducted at 20-foot intervals. Results for Lead (<4.7-12 mg/kg) were below the established FRL; BETX constituents were not detected; TPH was 28-112 mg/kg (no FRL established). [Source: UST-3 Tank Closeout Report (DOE 1992a)].

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
MAINTENANCE SHOP - BUILDING 12			
UST-6	**Remediation Area:** 3 **Former Location:** 1 foot N of Maintenance Shop (Bldg. 12) **Former Volume:** 1,000 gallons **Former Size:** 4 foot diameter x 12 foot length; steel **Former Accessories:** N/A	**Material:** Gasoline **COCs:** Acetone . . . . . (FRL; no OSDF WAC) Benzene . . . . . (FRL; no OSDF WAC) Carbon Tetrachloride . . . . . (FRL; no OSDF WAC) 1,2-Dichloroethane . . . . . (FRL; no OSDF WAC) 1,1-Dichloroethene . . . . . (FRL; OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Methyl Chloride . . . . . (no FRL; no OSDF WAC) Methyl Ethyl Ketone . . . . . (no FRL; no OSDF WAC) Tetrachloroethene . . . . . (FRL; OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) 1,1,1-Trichloroethane . . . . (no FRL; no OSDF WAC) Trichloroethene . . . . . (FRL; OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Arsenic . . . . . (FRL; no OSDF WAC) Cadmium . . . . . (FRL; no OSDF WAC) Chromium . . . . . (FRL as VI; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) Mercury . . . . . (FRL; OSDF WAC) Selenium . . . . . (FRL; no OSDF WAC) **Reference MEFs:** 501, 1616, 1618, 1672, 2746, 10026	**REMOVED — UST Removal Action appears to meet FRL criteria; Demonstration of Soil FRLs Attainment Needed.** Tank removed. Analytical results from 3 soil samples collected (selected based on highest PID levels) from the excavation indicated Lead (5.98-8.85 mg/kg), Toluene (5.4 μg/kg) and Xylene (11.8 μg/kg) are below established FRLs; Benzene (< 5.0 μg/kg) and Ethylbenzene (<5.0 μg/kg) were below detection limits, and below established FRLs; TPH was <10.0 mg/kg (no FRL established). [Source: Closure Assessment Report for Petroleum USTs (DOE 1991a)].

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
PLANT 1 TRUCK DOCK			
UST-11	**Remediation Area:** 4b **Former Location:** Buried under gravel approximately 6 feet E of Plant 1 Truck Dock and S of Bldg. 1. Also 2 feet N of UST-12 and 2 feet S of Plant 1 cyclone fence. **Former Volume:** 3,000 gallons **Former Size:** 5½ foot diameter x 18 foot length; steel **Former Accessories:** Tank piping ran N under cyclone fence, then approximately 10 feet to gas pump.	**Material:** Kerosene, Gasoline COCs: Benzene . . . . . (FRL; no OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Methyl Isobutyl Ketone . . . (no FRL; no OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) 1,1,1-Trichloroethane . . . . (no FRL; no OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Arsenic . . . . . (FRL; no OSDF WAC) Barium . . . . . (FRL; no OSDF WAC) Chromium . . . . . (FRL as VI; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) Mercury . . . . . (FRL; OSDF WAC) Selenium . . . . . (FRL; no OSDF WAC) **Reference MEFs:** 345, 492, 1408	**REMOVED — Demonstration of Soil FRLs Attainment Needed.** USTs-11, -12, and -13 were in poor condition upon removal. Soils surrounding USTs -11, -12, and -13 were sampled in 1990 upon completion of tank removal. Results for Benzene (342 μg/kg), Toluene (519 μg/kg), Ethylbenzene (2,920 μg/kg), Xylene (11,400 μg/kg), and Lead (19.7 mg/kg) are below established FRLs; maximum TPH was 1,810 mg/kg (no FRL established). [Source: Underground Storage Tanks Removal Site Evaluation (DOE 1991b)]. In 1991, additional soil excavation extended to approximately 11 feet deep and horizontally until structural constraints or non-petroleum hydrocarbon contamination discovered - 5,000 square feet with estimated volume of 2,000 cubic yards of soil. *No soil sampling conducted following 1991 excavation.* [Source: USTs-11, -12 and -13 Closure Report (DOE 1993c)]. The following is from R.E. Tiller 2/11/1992 letter to USEPA & OEPA: *During 1991 excavation, pocket of fly ash and rubble found approximately 50 feet E of tank cluster at 9 foot depth. Inconsistent organic vapor reading led to soil sampling. Results indicated presence of acetone and methanol* (could not find results in file) [NOTE: Acetone—FRL; no OSDF WAC; Methanol—no FRL; no OSDF WAC]. Also evidence of petroleum-contaminated soils underneath Plant 1 Truck Dock.

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
UST-12	**Remediation Area:** 4b **Former Location:** Approximately 6 feet E of Plant 1 Truck Dock and S of Bldg. 1. Also 2 feet S of UST-11. **Former Volume:** 3,000 gallons **Former Size:** 5½ foot diameter x 18 foot length; steel **Former Accessories:** Tank piping ran across UST-11, under cyclone fence, then approximately 10 feet to gas pump.	**Material:** Gasoline **COCs:** Benzene . . . . . (FRL; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) **Reference MEFs:** 492, 6055	**REMOVED — Demonstration of Soil FRLs Attainment Needed.** See entry for UST-11.
UST-13	**Remediation Area:** 4b **Former Location:** Approximately 25 feet E of Plant 1 Truck Dock and 40 feet S of Bldg. 1 cyclone fence. **Former Volume:** 3,000 gallons **Former Size:** 5½ foot diameter x 18 foot length; steel **Former Accessories:** Pump and remote fill at N end of paved road S of tank	**Material:** Kerosene, Gasoline **COCs:** Benzene . . . . . (FRL; no OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Methyl Isobutyl Ketone . . . (no FRL; no OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) 1,1,1-Trichloroethane . . . . . (FRL; no OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Arsenic . . . . . (FRL; no OSDF WAC) Barium . . . . . (FRL; no OSDF WAC) Chromium . . . . . (FRL; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) Mercury . . . . . (FRL; OSDF WAC) Selenium . . . . . (FRL; no OSDF WAC) **Reference MEFs:** 345, 492, 1408	**REMOVED — Demonstration of Soil FRLs Attainment Needed.** See entry for UST-11.

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
GARAGE - BUILDING 31			
UST-1	**Remediation Area:** 5 **Former Location:** Centerline approximately 51 feet E of Garage (Bldg. 31). Tank was buried approximately 1½ feet beneath a ½ foot concrete slab. **Former Volume:** 1,500 gallons **Former Size:** 8 foot diameter spherical tank; fiberglass **Former Accessories:** Piping from top of UST-1 to aboveground gasoline pumps and a 2 inch vent line from UST-1 to UST-2 and to Bldg. 31.	**Material:** Unleaded Gasoline **COCs:** Benzene . . . . . (FRL; no OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Barium . . . . . (FRL; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) Mercury . . . . . (FRL; OSDF WAC) **Reference MEFs:** 181, 60053	**REMOVED — UST Removal Action appears to meet FRL criteria; Demonstration of Soil FRLs Attainment Needed.** USTs -1, -2, -8, -9, -10 removed in concert. Soil excavated to maximum depth of 11 feet within footprint of the 5 tank cluster. Horizontal excavation continued until a physical constraint was encountered. Final excavation covered approximately 6,000 square feet of surface area. Excavated volume estimated at 2,500 cubic yards of soil. 9 soil samples (based on highest PID levels) were collected in 1990 when the tanks were removed but prior to final soil excavation. Results for Benzene (1,210 μg/kg), Toluene (382 μg/kg), Ethylbenzene (1,190 μg/kg), Xylene (1,1300 μg/kg), and Lead (35.6 mg/kg) are below established FRLs; TPH was 656 mg/kg (no FRL established). *No samples were collected during excavation; no post-excavation samples were collected.* USTs-1, -2, -8, -9 and -10 Closure Report (DOE 1993d) concluded that only minor residual petroleum contamination remained after excavation. Since USTs were located in an area with significant uranium contamination and further excavation was impractical, any additional remediation would be conducted under CERCLA.
UST-2	**Remediation Area:** 5 **Former Location:** Centerline approximately 51 feet E of Garage (Bldg. 31). Tank was buried approximately 1½ feet beneath a ½ foot concrete slab. **Former Volume:** 1,500 gallons **Former Size:** 8 foot diameter spherical tank; fiberglass **Former Accessories:** Piping from top of tank to aboveground gasoline pumps and 2 inch vent line from UST-2 to UST-1	**Material:** Unleaded Gasoline **COCs:** Benzene . . . . . (FRL; no OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Barium . . . . . (FRL; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) Mercury . . . . . (FRL; OSDF WAC) **Reference MEFs:** 181, 60053	**REMOVED — UST Removal Action appears to meet FRL criteria; Demonstration of Soil FRL Attainment Needed.** See entry for UST-1.

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
UST-8	**Remediation Area:** 5 **Former Location:** 12 feet NE of Garage (Bldg. 31). Tank was buried under 8 inch concrete slab with 2 foot x 2 foot 8 inch concrete dispensing pump foundation extending above pavement at N end of tank. **Former Volume:** 1,000 gallons **Former Size:** 4 foot diameter x 12 foot length; steel **Former Accessories:** Remote fill line ran from tank to 10 feet W of tank	**Material:** Leaded Gasoline **COCs:** Acetone . . . . . (FRL; no OSDF WAC) Benzene . . . . . (FRL; no OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Methyl Ethyl Ketone . . . . . (no FRL; no OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Arsenic . . . . . (FRL; no OSDF WAC) Selenium . . . . . (FRL; no OSDF WAC) **Reference MEFs:** 183, 487	**REMOVED — UST Removal Action appears to meet FRL criteria; Demonstration of Soil FRLs Attainment Needed.** See entry for UST-1.
UST-9	**Remediation Area:** 5 **Former Location:** 8½ feet from NE corner of Garage (Bldg. 31). ¾ of tank was buried under an 8 inch concrete pad. **Former Volume:** 1,000 gallons **Former Size:** 4 foot diameter x 12 foot length; steel **Former Accessories:** Remote fill line - tank to E wall of garage	**Material:** Diesel Fuel **COCs:** Acetone . . . . . (FRL; no OSDF WAC) Benzene . . . . . (FRL; no OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Methyl Ethyl Ketone . . . . . (no FRL; no OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Arsenic . . . . . (FRL; no OSDF WAC) Selenium . . . . . (FRL; no OSDF WAC) **Reference MEFs:** 131, 487, 60331	**REMOVED — UST Removal Action appears to meet FRL criteria; Demonstration of Soil FRL Attainment Needed.** See entry for UST-1.

12

2196

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
UST-10	**Remediation Area:** 5 **Former Location:** Centerline approx. 43½ feet E of Garage (Bldg. 31). Tank was buried beneath 2 gas pumps on concrete pad. **Former Volume:** 3,000 gallons **Former Size:** 5½ foot diameter x 18 foot length; steel **Former Accessories:** Concrete pump island with 2 pumps directly over tank	**Material:** Leaded Gasoline COCs: Acetone . . . . . (FRL; no OSDF WAC) Methylene Chloride . . . . . (FRL; no OSDF WAC) Trichlorofluoromethane . . . (no FRL; no OSDF WAC) Barium . . . . . (FRL; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) **Reference MEFs:** N/A; See MSDS	**REMOVED — UST Removal Action appears to meet FRL criteria; Demonstration of Soil FRLs Attainment Needed.** See entry for UST-1.

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
UST-5	**Remediation Area:** 5 **Former Location:** Approximately 10 feet E of Garage (Bldg. 31). **Former Volume:** 200 gallons **Former Size:** 2½ foot diameter x 6 foot length; steel	**Material:** Wastewater from Oil/Water Separator - contained hydraulic oil, motor oil, gasoline, diesel fuel and cleaning solvents (such as 1,1,1-Trichloroethane @ 6.3-6.9 mg/kg) **COCs:** Acetone . . . . . (FRL; no OSDF WAC) Aroclors/PCBs . . . . . (FRL; no OSDF WAC) Benzene . . . . . (FRL; no OSDF WAC) Carbon Tetrachloride . . . . . (FRL; no OSDF WAC) Cyclohexanone . . . . . (no FRL; no OSDF WAC) 1,2-Dichloroethane . . . . . (FRL; no OSDF WAC) 1,1-Dichloroethene . . . . . (FRL; OSDF WAC) Ethylbenzene . . . . . (FRL; no OSDF WAC) Ethyl Ether . . . . . (no FRL; no OSDF WAC) Methylene Chloride . . . . . (FRL; no OSDF WAC) Methyl Ethyl Ketone . . . . . (FRL; no OSDF WAC) Methyl Isobutyl Ketone . . . (no FRL; no OSDF WAC) Tetrachloroethene . . . . . (FRL; OSDF WAC) Toluene . . . . . (FRL; no OSDF WAC) 1,1,1-Trichloroethane . . . . (no FRL; no OSDF WAC) Trichloroethene . . . . . (FRL; OSDF WAC) Trifluorochloromethane . . . (no FRL; no OSDF WAC) Xylene . . . . . (FRL; no OSDF WAC) Arsenic . . . . . (FRL; no OSDF WAC) Barium . . . . . (FRL; no OSDF WAC) Cadmium . . . . . (FRL; no OSDF WAC) Chromium . . . . . (FRL as VI; no OSDF WAC) Lead . . . . . (FRL; no OSDF WAC) Mercury . . . . . (FRL; OSDF WAC) Selenium . . . . . (FRL; no OSDF WAC) Silver . . . . . (FRL; no OSDF WAC) **Reference MEFs:** 386, 1616, 1618, 1672, 1832, 10026, 10031, 30046, 60115, 60329, 60342	**REMOVED — UST Removal Action appears to meet FRL criteria; Demonstration of Soil FRLs Attainment Needed.** Tank reclassified from HWMU to SWMU (based on Waste Water Treatment Unit exemption); tank removed; soil removed during tank excavation was placed back into hole because no visibly contaminated soils were present [Source: USTs-5, -7, -14 and -17 Closeout Report (DOE 1995h)]. Soil samples were collected in 3/1990 after rainwater flowed into the tank after it had been uncovered. These sampling results were erroneously summarized in the UST-5 Removal Site Evaluation (RSE) (DOE 1993e) and USTs-5, -7, -14 and -17 Closeout Report (DOE 1995h). Review of analytical data indicates that results for rain water in tank and soil were switched in Table 1 of the RSE (and carried over into Closeout Report). As a result, these reports state that 1,1,1-Trichloroethane was detected in soils when the analytical data from the laboratory reports (included as Attachment 1 of the RSE) indicates that it was not detected. Results for Xylene (32 μg/kg), Barium (100 mg/kg), Arsenic (5.50 mg/kg), Cadmium (0.285 mg/kg), Chromium (20.7 mg/kg), Lead (11.1 mg/kg), and Silver (0.119 mg/kg) are below established FRLs; Benzene, Ethylbenzene and Toluene were not detected; Methanol (195 μg/kg) was detected but has no established FRL. No other semi-volatile or volatile organic compounds were detected in the soil.

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
HEAVY EQUIPMENT BUILDING - BUILDING 46			
UST-17	**Remediation Area:** 5 **Former Location:** Approximately 10 feet N of Heavy Equipment Building (Bldg. 46). **Former Volume:** 200 gallons **Former Size:** 2½ foot diameter x 6 foot length; steel	**Material:** Waste Oil from Oil/Water Separator **COCs:** Acetone . . . . . (FRL; no OSDF WAC) 1,1,1-Trichloroethane . . . . . (FRL; no OSDF WAC) Barium . . . . . (FRL; no OSDF WAC) Selenium . . . . . (FRL; no OSDF WAC) **Reference MEFs:** 123, 124, 60035 **SWMU - Not regulated by BUSTR**	**REMOVED — Demonstration of Soil FRsL Attainment Needed.** Tank and concrete slab above tank was removed (slab was at 8 foot depth) - tank was in very poor condition and, upon removal, water inside tank emptied into the excavation (water accumulated after tank was emptied of its contents). Water in excavation was immediately removed and drummed. Soils that came into contact with water or that were discolored were excavated — 3 drums with Lot code W050-741-P011-0395. [Source: USTs-5, -7, -14 and -17 Closeout Report (DOE 1995h)]. Soil samples were collected prior to excavation. Results for Xylene (27 μg/kg) and Lead (29.7 mg/kg) were below established FRLs; Benzene, Toluene and Ethylbenzene were not detected; maximum TPH was 3,300 mg/kg (no FRL established); no other volatile or semi-volatile organic compounds were detected in the soil samples. Note that one soil sample collected prior to excavation did contain 12.9 mg/L Chromium (EP Tox); but Chromium (10.9 mg/kg) is below the 300 mg/kg FRL established for Chromium VI; other metals analyzed (Arsenic, Barium, Cadmium, Mercury, Selenium and Silver) were below establsihed FRLs. 1,1,1-Trichloroethane was detected in the oil-separator (1,050 μg/kg) but was not detected in the soil (no FRL established). *No post-excavation soil samples were collected.* [Sources: USTs-5, -7, -14 and -17 Closeout Report (DOE 1995h); UST-17 Removal Site Evaluation (DOE 1993f)].

TABLE 2-2
(Continued)

TANK ID	DESCRIPTION	FORMER CONTENTS	STATUS & DESCRIPTION OF CLOSURE ACTIVITIES
TANK CLOSED IN PLACE – TO BE REMOVED FROM THE GROUND UNDER CERCLA			
PLANT 6			
UST-14	**Remediation Area:** 4a **Location:** Buried under concrete floor in former scrap melting area (S end) of Plant 6. **Volume:** 3,000 gallons **Size:** 5½ foot diameter x 18 foot length; steel	**Material:** Waste Soluble Machining Oil - a heavy napthenic petroleum oil. **COCs:** Methanol . . . . . (no FRL; no OSDF WAC) **Reference MEFs:** N/A; see MSDS Analysis of tank residues: Methanol, 40 mg/kg; no other volatile or semi-volatile compounds or metals were detected. [Source: UST-14 Closure Report (DOE 1992b)].	**CLOSED IN PLACE – UST to be removed from the ground; Demonstration of Soil FRLs Attainment Needed.** Removed perched water from tank, disconnected process piping and filled tank with grout. To sample the soil beneath the UST, a hole was cut in the bottom of the tank. Perched water began flowing into the tank. *The presence of water precluded the sampling of underlying soils.* [Source: UST-14 Closeout Report (DOE 1995i).] Two soil samples were collected at a total depth of 2 feet below the base of the oil supply line. Results for Lead (17.8 mg/kg) were below the established FRL; BETX constituents (Benzene, Ethylbenzene, Toluene and Xylene) were not detected; TPH was 139-174 mg/kg (no FRL established). [Source: 6/1992 UST-14 Closure Report (DOE 1992b).] An inspector from the State Fire Marshal's office inspected and approved tank abandonment in place on 03/16/1995 [Source: UST-14 Closeout Report (DOE 1995i)].

BETX	Benzene, Ethylbenzene, Toluene and Xylenes	N/A	Not applicable
BUSTR	Ohio Bureau of Underground Storage Tank Regulations	OSDF	On-Site Disposal Facility
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	PID	Photoionization Detector
COCs	Constituents of Concern	RSE	Removal Site Evaluation
FRL	Final Remediation Level	SWMU	Solid Waste Management Unit
HWMU	Hazardous Waste Management Unit	TPH	Total Petroleum Hydrocarbons
MEF	Material Evaluation Form	µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram	UST	Underground Storage Tank
MSDS	Material Safety Data Sheet	WAC	Waste Acceptance Criteria